

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 1-10 have been canceled in favor of new claims 11-20. Support for the subject matter of the new claims is provided for example in the original claims, Figs. 5, 8 and 9, and paragraphs [0049]-[0052] and [0066]-[0067] of the published specification. (It should be noted that references herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Claims 1-3 and 6-10 were rejected, under 35 USC §103(a), as being unpatentable over Anim-Appiah et al. (US 2004/0100898) in view of Shibuya et al. (US 2002/0016158). Claims 4-5 were rejected, under 35 USC §103(a), as being unpatentable over Anim-Appiah in view of Shibuya and Itoh (US 2003/0031135). To the extent that these rejections may be deemed applicable to new claims 11-20, the Applicants respectfully traverse based on the points set forth below.

Claim 11 recites features of canceled claim 1 and defines a direct conversion reception apparatus that: (1) selects a maximum gain among gains of individual time slots, estimated on a per time slot basis, and (2) calibrates an offset voltage of a signal that is going to be received, on a per frame basis, using a calibration value matching the selected maximum gain. The claimed subject matter provides an advantage of: (1) minimizing the influence of a remaining offset voltage in gain control during a reception operation, thus making it possible to prevent saturation and sensitivity degradation even when power control is performed in multi-slot transmission, and

(2) calibrating an offset voltage without increasing current consumption (see published specification, paragraph [0081]).

The Office Action acknowledges Anim-Appiah does not disclose calibrating an offset voltage of received signals, before a reception period, at a selected maximum gain (see Office Action page 3, lines 1-3). To overcome this deficiency, the Office Action proposes that Shibuya discloses, in paragraph [106], calibrating an offset voltage based on a selected maximum gain (see Office Action page 3, lines 4-7).

However, by contrast to the Applicants' claimed subject matter of calibrating an offset voltage using a calibration value matching a selected maximum gain, Shibuya discloses that an offset voltage is varied based on a change of the number of carriers to be gain controlled, so that the power for each of the carriers is made constant (see Shibuya paragraph [0106], lines 9-14). Shibuya does not disclose the Applicants' claimed subject matter of selecting a maximum gain among gains of individual time slots estimated on a per time slot basis. Thus, it necessarily follows *per force* that Shibuya cannot disclose the Applicants' claimed subject matter of calibrating, on a per frame basis, an offset voltage of a signal that is going to be received using a calibration value matching the selected maximum gain.

Accordingly, the Applicants submit that even if Anim-Appiah and Shibuya were combined as proposed in the Office Action, the result still would lack features of claim 11, and thus, these references, considered individually or in combination, do not render obvious the subject matter defined by claim 11. Independent claims 17 and 19 similarly recite the above-mentioned subject matter distinguishing apparatus claim 11 from the applied references, although

claim 17 does so with respect to a method. Therefore, allowance of claims 11, 17, and 19 and all claims dependent therefrom is warranted.

To promote a better understanding of the patentable distinctions of the claimed subject matter over the applied references, the Applicants provide the following additional remarks.

Anim-Appiah discloses a baseband processor that measures the power of a received signal, derives a variable gain control setting, and sends the variable gain control setting to a variable gain module while the baseband processor processes the preamble of a packet (see Anim-Appiah, abstract and Fig. 1). However, Anim-Appiah does not disclose the Applicants' claimed subject matter of calibrating an offset voltage using a calibration value matching a maximum gain.

Shibuya discloses that an automatic level control (ALC) operation is not carried out when a total transmission power is maintained constant, regardless of the number of carriers to be transmitted (see Shibuya paragraph [0106], lines 1-4). On the other hand, when the transmission power per carrier is maintained constant, the ALC offset voltage setting varies depending on changes with the number of carriers (see paragraph [0106], lines 9-14).

The Applicants' claimed subject matter distinguishes over the teachings of Anim-Appiah and Shibuya in that an offset voltage is calibrated using a calibration value matching a maximum gain. Moreover, while the instant claimed subject matter calibrates an offset voltage, Shibuya discloses varying an offset voltage for transmission power control in a transmitter.

Accordingly, for these further reasons, the Applicants submit that even if the teachings of Anim-Appiah and Shibuya are combined in the manner proposed in the Office Action, the result still would lack the above-noted features of the present claims. Thus, these references,

considered individually or in combination, do not render obvious the subject matter now defined by claims 11-20.

In view of the above, it is submitted that this application is in condition for allowance and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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